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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,232	07/08/2005	Bradley Mccoll	28967/5794C	1644
4743 7590 01/23/2008 MARSHALL, GERSTEIN & BORUN LLP 233 S. WACKER DRIVE, SUITE 6300 SEARS TOWER CHICAGO, IL 60606				
EXAMINER				
SAOUD, CHRISTINE J				
ART UNIT		PAPER NUMBER		
1647				
MAIL DATE		DELIVERY MODE		
01/23/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/522,232

**Applicant(s)**

MCCOLL ET AL.

**Examiner**

Christine J. Saoud

**Art Unit**

1647

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5, 15 and 18-25 is/are pending in the application.
- 4a) Of the above claim(s) 15, 24 and 25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 18-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/08)  
Paper No(s)/Mail Date 12/13/07, 11/13/07, 8/16/07

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

Applicant's response of 16 October 2007 had been received and entered. Claims 1-5 and 15 have been amended, claims 6-14 and 16-17 have been canceled, and claims 18-25 have been added. Claims 15 and 24-25 are withdrawn as being directed to a non-elected invention. The election was made without traverse in the reply filed on 16 April 2007.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Any objection or rejection of record which is not expressly repeated in this action has been overcome by Applicant's response and withdrawn.

Applicant's arguments filed 16 October 2007 have been fully considered but are not persuasive.

### ***Information Disclosure Statement***

Applicant's IDS's filed 16 October 2007, 13 November 2007 and 13 December 2007 have been received and considered.

### ***Drawings***

The drawings were received on 16 October 2007. These drawings are acceptable.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 and 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Stacker et al. (J. Biol. Chem. 274(45): 32127-32136, 1999) and Joukov et al. (EMBO J. 16(13): 3898-3911, 1997).

The instant claims are directed to a method of activating VEGF-D or VEGF-C by treating the VEGF molecule with a serine protease. Stacker et al. teach that VEGF-D is activated by proteolytic processing (see page 32135, Figure 8 and column 1, paragraph 1). Stacker et al. do not teach the administration of a serine protease or plasmin for the activation of VEGF-D.

Joukov et al. teach that VEGF-C is activated by proteolytic processing (see abstract) and that a key processing site is cleavage between Arg227 and Ser228. Joukov et al. also teach that plasmin cleaves high molecule weight VEGF froms. Joukov et al. do not teach the administration of plasmin (or other serine protease) for the activation of VEGF-C.

It would have been prima facie obvious to one of ordinary skill in the art at the time the instant invention was made to contact the isolated VEGF-C or VEGF-D of Stacker et al. and Joukov et al. with plasmin in order to activate the VEGF molecules because plasmin is a natural protease which cleaves VEGF and there would be an expectation that plasmin would also be useful for cleaving VEGF-C and VEGF-D because of the structural similarities of the VEGF molecules. One would be motivated to use plasmin for this purpose because cleavage of the VEGF molecules activates

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them for binding to the VEGF receptors. One would have a reasonable expectation of success in using plasmin for this purpose because plasmin cleaves VEGF, it is a protease known to cleave a number of different proteins and because VEGF-C and VEGF-D are part of the VEGF family and share common structural features with VEGF. Therefore, the invention as a whole would have been prima facie obvious at the time it was made, absent evidence to the contrary.

### ***Conclusion***

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine J. Saoud whose telephone number is 571-272-0891. The examiner can normally be reached on Monday-Friday, 6AM-2PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Manjunath Rao can be reached on 571-272-0939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christine J Saoud/  
Primary Examiner, Art Unit 1647